



## Senior Design — Team 14 Periodic Report 03

*Reporting Period:* September 25th through October 8th

### **Team Members:**

- Daryl Damman - Team Lead
- Logan Lee - Testing & Prototyping
- Grant Nordling - Parts Management & Quality Control
- Braxton Rokos - PCB Routing & Prototyping
- Gavin Tersteeg - Quality Control & Testing

### **Progress Summary**

Over this period, we conducted two TA, Team, and Client meetings, with some of the content from the September 25th meeting being included in the last weekly report. In the initial week of this timeframe, we initiated our first parts order with ETG. These components have since arrived and are presently in use for our project's assembly. An important challenge we encountered during this time revolved around the establishment of various standards. This entailed deciding on a color code for wires, LEDs, the orientation of the breadboard, and the pinout for ribbon cables. Subsequently, we successfully established standards for the ribbon cable pinout, wire colors, and the direction of the breadboard. Additionally, we made plans to incorporate more components in the next parts order. At the conclusion of the client meeting in the first week of this period, it was determined that our next design challenge would focus on the boot sequence.

In the second week of this period, our attention shifted to the boot sequence. Three main design ideas were proposed for the boot sequence. Two of these ideas were quite similar, revolving around the use of ROM and banking memory to store and access data. The RAM would remain untouched until a user manually input a program for execution. The third idea, suggested by the client, involved the addition of alternative memory in the form of a hard disk. The group faced difficulty in selecting which idea to proceed with, and it was decided



that each concept should be elaborated on in separate documents. These documents will be reviewed in our upcoming meeting. During this week, we also revisited our MUX design on the breadboards.

## Pending Concerns and Issues

- We need to decide which boot sequence style to implement.
- Need to design the clock
- Need to design the video card
- Need to build the multiplexer circuits (8-bit, 2-1)

## Upcoming Plans for Next Period

The goals for the next segment of work are to start building various parts of the project on breadboards. We also need to start creating schematics for all parts of the design. We need to finalize a method for the boot sequence.